

Applicant: MUSSMANN *et al*
Appl. Ser. No.: 09/931,162
Filing Date: August 17, 2001
Amendment and Reply to Final Office Action
October 19, 2004
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 – Claim 18 (canceled)

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Claim 19. (previously presented) A process for preparing an oxygen storage material for use in an automobile exhaust gas purification system, comprising preparing a hydroxidic precursor of a mixed oxide of cerium and at least one of silicon or zirconium by a wet-chemical process, drying said precursors at a temperature from 80° C to 300° C with the formation of an oxide/hydroxide/carbonate dried mixture, treating the dried mixture under a hydrogen-containing atmosphere at a temperature from 600° C to 900° C for a period of 1 to 10 hours.

Claim 20. (original) The process according to claim 19 wherein said wet-chemical process is carried out by (a) co-thermohydrolysis of an aqueous solution of salts of cerium and at least one of zirconium or silicon or (b) precipitating hydroxides of cerium and at least one of zirconium or silicon from an aqueous solution of their respective salts by adding a base to said aqueous solution.

Claim 21. (previously presented) A process for improving the oxygen storage capacity and the dynamic behavior of oxygen storage materials comprising mixed oxides of cerium oxide and zirconium oxide, wherein said oxygen storage material has a loss on ignition of more than 6 wt.-% and a specific surface area of more than 140 m²/g and

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wherein the process comprises heating said oxygen storage material in a reducing atmosphere at temperatures between 600 and 900 °C for a period of 1 to 10 hours.

Claim 22. (previously presented) The process of claim 21, wherein said oxygen storage material contains 20 to 99 wt.-% of cerium oxide with respect to the total weight of said oxygen storage material.

Claim 23. (previously presented) The process of claim 22, wherein said oxygen storage material contains 60 to 90 wt.-% of cerium oxide and 40 to 10 wt.-% of zirconium oxide with respect to its total weight.

Claim 24. (previously presented) The process of claim 22, wherein said oxygen storage material further comprises 0.6 to 20 wt.-% of a metal oxide, wherein the metal of the metal oxide is selected from the group consisting of yttrium, scandium, lanthanum, praseodymium, neodymium, samarium, gadolinium and terbium.

Claim 25. (previously presented) The process according to claim 21, wherein the oxygen storage material has a specific surface area of more than 20 m²/g after heating in said reducing atmosphere.